Listing of Statistics for Run3-2004 (Created Wed Dec 22 10:16:53 CST 2004)

Total Amount of User Time in this interval 1569.65 Hours

User periods in this interval

```
10/05/2004 08:00  To  10/11/2004 16:00 152.00 Hours, Delivered Beam:
151.99 Hours,  0 Fault(s), 151.99 MTBF,  99.99% of Sched. Time
10/12/2004 08:00  To  10/18/2004 08:13 144.22 Hours, Delivered Beam:
139.45 Hours,  2 Fault(s),  69.72 MTBF,  96.69% of Sched. Time
10/20/2004 08:00  To  10/26/2004 08:00 144.00 Hours, Delivered Beam:
143.99 Hours,  0 Fault(s), 143.99 MTBF, 100.00% of Sched. Time
10/26/2004 16:00  To  11/01/2004 08:00 137.00 Hours, Delivered Beam:
127.85 Hours,  4 Fault(s),  31.96 MTBF,  93.32% of Sched. Time
11/03/2004 08:00  To  11/08/2004 16:00 128.00 Hours, Delivered Beam:
126.86 Hours,  1 Fault(s), 126.86 MTBF,  99.11% of Sched. Time
11/09/2004 08:00  To  11/15/2004 08:00 144.00 Hours, Delivered Beam:
142.61 Hours,  2 Fault(s),  71.30 MTBF,  99.03% of Sched. Time
11/17/2004 08:00  To  11/23/2004 08:00 144.00 Hours, Delivered Beam:
143.99 Hours,  0 Fault(s), 143.99 MTBF, 100.00% of Sched. Time
11/23/2004 16:00  To  11/24/2004 24:00  32.00 Hours, Delivered Beam:
31.99 Hours,  0 Fault(s),  31.99 MTBF,  99.98% of Sched. Time
11/26/2004 08:00  To  11/30/2004 16:00 104.00 Hours, Delivered Beam:
103.99 Hours,  0 Fault(s), 103.99 MTBF,  99.99% of Sched. Time
12/02/2004 08:00  To  12/07/2004 16:30 128.50 Hours, Delivered Beam:
126.96 Hours,  2 Fault(s),  63.48 MTBF,  98.80% of Sched. Time
12/08/2004 08:00  To  12/13/2004 16:00 128.00 Hours, Delivered Beam:
126.80 Hours,  1 Fault(s), 126.80 MTBF,  99.06% of Sched. Time
12/14/2004 08:00  To  12/21/2004 24:00 184.00 Hours, Delivered Beam:
182.72 Hours,  2 Fault(s),  91.36 MTBF,  99.31% of Sched. Time
```

Delivered Beam	1549.21 Hours
Percentage of Scheduled Time	98.70 %
Downtime During Period	20.44 Hours
Percentage of scheduled time SR current > 10 ma	99.02 %
Average Delivered Current During This Period	99.59 mA
Total integrated Current During This Period	154.28 A-hr
Mean Fill Duration in Period	103.28 Hours
Mean Fill Duration from Poisson Fit	105.12 Hours
Mean Time Between Faults (MTBF)	110.66 Hours
Faults per Day of Delivered Beam	0.22
Total Number of Faults	14
Scheduled Topup Time	1233.50 Hours

Length of Fill#	Valid fills Beginning in this Time Interval Start	End	Duration	Downtime is associated with the end of a fill. The first fill of a period will have any downtime before the fill on the line above. (min: 1.0)	Reason for Fill Termination

```
                                                  |
|  0.01
#  1  10/05 08:00  To  10/11 15:59  151.99  | Int Dump: End of Period
|  0.00
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
#  2  10/12 08:00  To  10/13 05:17   21.28  | 22BM PSS Fault      [SI]
|  1.86 Failed processor. SI-1hr.14min, Other-37min.
#  3  10/13 07:08  To  10/17 23:05  111.95  | Power Bump       [ComEd]
|  2.86 ComEd transformer failure, recovery, refill.
#  4  10/18 01:56  To  10/18 08:09    6.22  | Int Dump: End of Period
|  0.05
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
#  5  10/20 08:00  To  10/26 07:59  143.99  | Int Dump: End of Period
|  0.00
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
#  6  10/26 16:00  To  10/28 02:13   34.22  | S1B:V4 trip         [PS]
|  6.64 3.45 PS group, 1.97 Diag, 1.22 Ops, resume top-up
#  7  10/28 08:51  To  10/28 17:10    8.31  | Bunch Purity       [OPS]
|  0.38 Beam dumped to improve bunch purity, refill.
#  8  10/28 17:33  To  10/29 09:53   16.34  | S23C:BM Dac Loss    [PS]
|  1.70 .5 PS Group, 1.2 RF Group. refill, resume top-up.
#  9  10/29 11:35  To  10/30 00:23   12.79  | SR-RF3 Trip        [BLD]
|  0.43 SR-RF3 Trip due to high humidity, refill.
# 10  10/30 00:48  To  11/01 07:59   56.18  | Int Dump: End of Period
|  0.00
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
# 11  11/03 08:00  To  11/08 08:33  120.56  | 9-ID EPS Trip       [ME]
|  1.13 9-ID DP flow problem, refill, resume top-up.
# 12  11/08 09:41  To  11/08 15:59    6.30  | Int Dump: End of Period
|  0.00
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
# 13  11/09 08:00  To  11/09 13:22    5.38  | Rad. Mon. Trip     [UES]
|  0.75 Spurious Rad Monitor trip at 7-ID, refill, top-up.
# 14  11/09 14:07  To  11/13 02:51   84.74  | SR-RF4 Trip         [RF]
|  0.64 RF-4 power monitor trip, refill, resume top-up.
# 15  11/13 03:30  To  11/15 07:59   52.49  | Int Dump: End of Period
|  0.00
------------------------------------------------------------------------
------------------------------------------------------------
                                                  |
|  0.00
```

```
# 16  11/17 08:00  To  11/23 07:59  143.99  | Int Dump: End of Period
|  0.00
-------------------------------------------------------------------------
-------------------------------------------------------
                                             |
|  0.00
# 17  11/23 16:00  To  11/24 23:59   31.99  | Int Dump: End of Period
|  0.00
-------------------------------------------------------------------------
-------------------------------------------------------
                                             |
|  0.00
# 18  11/26 08:00  To  11/30 15:59  103.99  | Int Dump: End of Period
|  0.00
-------------------------------------------------------------------------
-------------------------------------------------------
                                             |
|  0.68
# 19  12/02 08:40  To  12/03 08:38   23.96  | 34-ID BPLD Trip    [DIA]
|  0.39 X-Ray BPM pre-amp chassis error, refill, top-up
# 20  12/03 09:01  To  12/07 08:05   95.07  | RF-2 Trip           [RF]
|  0.47 Circulator Out Arc trip, refill, resume top-up.
# 21  12/07 08:34  To  12/07 16:29    7.92  | Int Dump: End of Period
|  0.00
-------------------------------------------------------------------------
-------------------------------------------------------
                                             |
|  0.00
# 22  12/08 08:00  To  12/11 22:20   86.34  | S39A:S2 Fault       [PS]
|  1.20 Power supply swapped, refill, resume top-up.
# 23  12/11 23:32  To  12/13 15:59   40.46  | Int Dump: End of Period
|  0.00
-------------------------------------------------------------------------
-------------------------------------------------------
                                             |
|  0.01
# 24  12/14 08:00  To  12/19 08:59  120.98  | SR-RF4 Trip         [RF]
|  0.63 SR-RF4 Magnet #1 Under current trip. Reset, refill.
# 25  12/19 09:36  To  12/19 13:13    3.61  | SR-RF4 Trip         [RF]
|  0.64 SR-RF4 Magnet #1 Under current trip. Reset, refill.
# 26  12/19 13:51  To  12/21 23:59   58.14  | Int Dump: End of Period
|  0.00

Top-Up Mode Statistics
----------------------
Target Current Range  2.0, Minimum Injector Downtime = 8.0 minutes

Total
  Current in Range during Scheduled Topup Time   96.93 %
  Current in Range during Delivered Beam Time    98.96 %
  Injector Availability                          98.89 %

Period Beginning 10/12/2004 08:00
Current in Range                                 96.44 %
Injector Availability                            96.29 %
  Out of Range at:     10/17/2004 13:18:46 to 10/17/2004 18:03:26 :
284.67 minutes
```

```
    Injector downtime: 10/17/2004 13:13:51 to 10/17/2004 18:02:46 :
288.92 minutes
  Out of Range at:     10/17/2004 23:05:16 to 10/17/2004 23:05:16 :
0.00 minutes
    Injector downtime: 10/17/2004 22:57:16 to 10/17/2004 23:05:16 :
8.00 minutes (est)

Period Beginning 10/20/2004 08:00
Current in Range                                  100.00 %
Injector Availability                             100.00 %

Period Beginning 10/26/2004 16:00
Current in Range                                   97.56 %
Injector Availability                              97.43 %
  Out of Range at:     10/27/2004 23:00:44 to 10/27/2004 23:59:54 :
59.17 minutes
    Injector downtime: 10/27/2004 22:55:49 to 10/27/2004 23:59:49 :
64.00 minutes
  Out of Range at:     10/28/2004 00:04:54 to 10/28/2004 02:13:04 :
128.17 minutes
    Injector downtime: 10/27/2004 23:59:59 to 10/28/2004 02:12:59 :
133.00 minutes

Period Beginning 11/03/2004 08:00
Current in Range                                  100.00 %
Injector Availability                              99.89 %
  Out of Range at:     11/04/2004 11:38:44 to 11/04/2004 11:38:44 :
0.00 minutes
    Injector downtime: 11/04/2004 11:30:44 to 11/04/2004 11:38:44 :
8.00 minutes (est)

Period Beginning 11/09/2004 08:00
Current in Range                                   99.51 %
Injector Availability                              99.45 %
  Out of Range at:     11/10/2004 17:13:12 to 11/10/2004 17:55:33 :
42.35 minutes
    Injector downtime: 11/10/2004 17:08:18 to 11/10/2004 17:55:28 :
47.17 minutes

Period Beginning 11/17/2004 08:00
Current in Range                                   99.96 %
Injector Availability                              99.91 %
  Out of Range at:     11/21/2004 17:33:04 to 11/21/2004 17:36:43 :
3.65 minutes
    Injector downtime: 11/21/2004 17:25:04 to 11/21/2004 17:33:04 :
8.00 minutes (est)

Period Beginning 11/23/2004 16:00
Current in Range                                  100.00 %
Injector Availability                             100.00 %

Period Beginning 11/26/2004 08:00
Current in Range                                   99.79 %
Injector Availability                              99.75 %
  Out of Range at:     11/28/2004 13:36:38 to 11/28/2004 13:49:48 :
13.17 minutes
```

Injector downtime: 11/28/2004 13:31:43 to 11/28/2004 13:47:28 : 15.75 minutes

Period Beginning 12/02/2004 08:00
Current in Range 97.05 %
Injector Availability 97.00 %
Out of Range at: 12/03/2004 14:56:55 to 12/03/2004 18:41:35 : 224.67 minutes
Injector downtime: 12/03/2004 14:52:00 to 12/03/2004 18:40:45 : 228.75 minutes

Period Beginning 12/08/2004 08:00
Current in Range 100.00 %
Injector Availability 100.00 %